REMARKS/ARGUMENTS

1. The claim amendment presented herein is in part responsive to the Examiner's holding in the November 14, 2008 final rejection that claims 14-19 would be allowable if claim 14 were rewritten in independent form to include all limitations of the base claim and any intervening claims. Claim 14 has been amended accordingly and is therefore believed to be in condition for allowance, along with the claims dependent thereon.

2. Claim 13 has been maintained as presented in Applicant's response to the February 4, 2008 Office Action, and claims 20 and 21 have been amended to make them dependent on either of claims 13 or 14. Claims 22-24 are newly presented and generally correspond to claims 17-19 but are dependent on claim 13 instead of claim 14. New claims 22-24 find support in Applicant's specification as filed. For example, see the drawing and paragraph [0014] and the first line of paragraph [0015]. In paragraph [0017], the switch 24 is described as being optional.

3. The Applicant respectfully traverses the rejection of claims 13, 20 and 21 for the reasons set forth below. All references below to "OA paragraph(s)" of the November 14, 2008 Office Action are to the paragraphs of the "Detailed Action" starting at page 2 of the Office Action.

Rejection of Claims Under 35 U.S.C. 103

4. In OA paragraphs 3 and 4, claims 13, 20 and 21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Bossarte et al.* U.S. Patent 6,490,977 ("*Bossarte*").

This ground of rejection is respectfully traversed.

5. In the second bullet point of OA paragraph 4, the Examiner refers to *Bossarte's* "detonators 20" and cites lines 64-66 without specifying a column number. The *Bossarte* ignitors, which are treated by the Examiner as equivalent to the detonators of the above-captioned application, are numbered "4" and cited lines 64-66 are in column 5. In any case, the Examiner states that *Bossarte* shows a blast control unit which is directly connected to a plurality of detonators and that "the distribution panel 22 may be included in a single package, therefore causing the interface/control unit 20 to become directly connected to the plurality of detonators."

6. The Applicant respectfully disputes the Examiner's contention. *Bossarte's* distribution panel 22 is not re-positioned in the circuitry simply by including it in a single package. Joining the components 20 and 22 in a single package does not change the sequence in the circuitry of these (or any other) components. However packaged, in *Bossarte* the interface/control module or panel 20 is always separated from the ignitors 4 by distribution panel 22 and consequently panel 20 is never directly connected to the ignitors 4. The *Bossarte* structure of positioning the distribution panel 22 between ignitors 4 and control panel 20 is not a mere design choice but is essential to the functioning of the *Bossarte* device. This is made clear by considering *Bossarte* at column 5, lines 15-17, wherein the control panel 20 is said to contain five switches 15 which allow individual cues to be enabled for ignition of selected ignitors 4 at a particular time. As described at column 5, lines 17-27, *Bossarte* wishes to fire the pyrotechnics in separate batches timed to coincide with the choreography of the pyrotechnic display. The selected one of switches 15 is pressed and then the firing button 16 is pressed which initiates launch of the pyrotechnic shells designated for the enabled cue(s). The next cue is then selected by another of switches 15 and firing button 16 is then operated. In view of the above, it is quite clear in *Bossarte* that the distribution panel 22 is essentially interposed between the control panel 20 and the ignitors 4 in order to distribute the separate firing signals in response to the several cues. Without distribution panel 22 in its prescribed location, the whole purpose of *Bossarte* to control the firing sequence in response to cues is defeated. *Bossarte* therefore entirely fails to teach or suggest any structure other than interposition of distribution panel 22 between ignitors 4 and the control panel 20 of *Bossarte*. Consequently, there is no teaching or suggestion of a direct connection between the Applicant's interface/control unit and the detonators.

7. In the third bullet under OA paragraph 4, the Examiner cites lines 35-46 of column 6 of *Bossarte* as teaching that the battery/blast key 27/25 provides energy at a level suitable to carry out detonation. (In this bullet point, the Examiner refers to the blast key "27" when it should be "25"; item 27 is the battery, as shown in Figure 2. The Examiner's subsequent references, e.g., in OA paragraph 6, to "battery/blast key 27" should be "battery/blast key 27/25" and the latter terminology is used herein.)

8. In OA paragraph 5, the Examiner acknowledges that *Bossarte* does not specifically teach that the battery/blast key 27/25 is removably connected to the blast control unit (interface module) 20. However, in OA paragraph 6, the Examiner states that it would have been obvious to allow the battery/blast key 27/25 to be detachable from the wires 28. In the *Bossarte* structure, however, this would require disconnecting not only the battery 27, but at least the key 26. See column 5, lines 39-44 of *Bossarte*. The *Bossarte* structure would not suggest any such dismantlement to the skilled practitioner. While the schematic nature of the drawing may suggest that battery 27 could readily be disassembled, in practice battery 27 would be enclosed within interface module 20. More importantly, what would the motivation be to disassemble interface module 20 by removing from it key switch 25 and/or key 26 and battery 27? As noted at column 5, lines 39-43 of *Bossarte*, key switch 25 and key 26 are provided "to ensure that no power is applied to any ignitors 4 while people are loading the shells into the mortars." What would motivate the skilled practitioner to delete these essential safety features from interface module 20 by making them removable? Key switch 25 and key 26 are desirably left in place at all times to provide a safety feature which prevents serious and possibly fatal injury to those working with the *Bossarte* equipment. If key switch 25 and/or key 26, which are separate from battery 27, are not replaced in the system until after battery 27 is replaced, a disastrous accident could occur. In contrast, by combining the energy source and the blast key in a single unit as required by the Applicant's claims, the remainder of the system is incapable of arming the detonators until the blast key/power source is installed.

Case Citation By the Examiner

9. It is respectfully submitted that the Examiner's citation of *Nerwin v. Erlicnrnan* [sic] is not apt under the circumstances of this application. (The correct case citation is *Nerwin v. Erlichman*, 168 USPQ 177, Bd. of Pat. Inter. (1969).) The initial part of only headnote [4] is pertinent to our case.

10. In the U.S. Supreme Court and other cases noted in the initial part of headnote [4] of *Nerwin v. Erlichman*, in each case the issue was entirely different from the present situation. The cited cases were concerned with whether integral structures or equivalent structures assembled from separate elements made a pat-

entable distinction. But that was in a context in which the components of the two structures performed in the same way to attain the same result. In contrast, the structure defined by Applicant's claim 13 and the claims dependent thereon require that the power source and the blast key be in a single, removable and replaceable element. Therefore, in contrast to the cases cited in the *Newin v. Erlichman* case, supra, the differences between Applicant's claim 13 and the teaching of *Bossarte* is that in *Bossarte*, there is no structure corresponding to the Applicant's unitary blast key/power source structure. As noted above, in *Bossarte* (1) the battery 27 and (2) the key switch 25/key 26 are not combined with each other, but are separate components of the system. As indicated above, this raises the specter of the possibility of switch 25 being closed when battery 27 is replaced in the system. *Bossarte* does not provide a fail-safe structure to prevent premature ignition, whereas Applicant does.

11. Far from being obvious from the reference, the Examiner's modification of the *Bossarte* reference appears to be based solely on Applicant's disclosure and thus involves the discredited use of hindsight reasoning.

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In view of foregoing, it is respectfully submitted that each of the pending claims is now in condition for allowance. Such action is respectfully requested.

Respectfully submitted,

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